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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,444	12/21/2001	Robert G. McFarland	02CR026/KE	1569
7590	09/14/2005			EXAMINER
Attn: Nathan O. Jensen ROCKWELL COLLINS, INC. M/S 124-323 400 Collins Rd. NE Cedar Rapids, IA 52402			DYKE, KERRI M	
			ART UNIT	PAPER NUMBER
			2667	
			DATE MAILED: 09/14/2005	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/027,444	MCFARLAND ET AL.
	Examiner	Art Unit
	Kerri M. Dyke	2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 21 December 2001.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-19 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-13 and 15-19 is/are rejected.
- 7) Claim(s) 14 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 21 December 2001 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date: _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>12/21/2001</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4-5) because they include numerous errors. For example, the antenna of figure 1 is referred to using numeral 19, but marked with numeral 20, and both the method, 20, and step 21 or figure 2 are not labeled. Please identify and correct all errors. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.74 because figures 7-12 lack a brief description in the specification.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The title should more clearly point out that the invention is directed to a method for resending only a portion of the original message.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muramatsu (JP 403010547 A) in view of Miller (US 6,567,395).

In regards to claims 1 and 8, Muramatsu discloses a method for sending identifying information, comparing the identifying information to the received information, indicating the results of the comparison to the sending node, and resending the unreceived portion. Muramatsu does not disclose using the method in a wireless network or using a frequency in the HF range.

Miller discloses a wireless HF network in column 1 lines 38-39.

It would have been obvious to one of ordinary skill in the art to use the method for efficiently overcoming interference as taught by Muramatsu within the HF network taught by Miller because HF networks are susceptible to interference. This is taught by Miller in column 2 lines 10-16.

In regards to claim 2, Muramatsu and Miller disclose the method of claim 1, wherein the receiving node identifies a size of the portion of the sent message that has not been received. Because each message is divided into equally sized portions, the size of the unreceived message is always known.

In regards to claim 3, Muramatsu and Miller disclose the method of claim 2, wherein the receiving node identifies a location of the portion of the message that has not been received.

Muramatsu divides each message into segments so the location of the failed transmission is easily determined.

In regards to claim 4, Muramatsu and Miller disclose the method of claim 1, wherein the received message has a size, and further wherein the receiving node identifies the size of the received message. The size of the received message is inherently the number of segments sent times the size of each segment. Since both the number of segments received and the size of each is known, the size of the received message is inherently known.

In regards to claim 5, Muramatsu and Miller disclose the method of claim 1. It does not disclose the method further including: re-transmitting the sent message to the receiving node if a predetermined time elapses before the sending node receives the response. The applicant admits in the background of the invention that it is known to resend a message if all or a portion of it is not received. It would have been obvious to one of ordinary skill in the art to resend the message after a predetermined time elapses because without a time-out mechanism the network might become useless while it waits interminably for the message to be received.

6. Claims 6-7, 9, and 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muramatsu (JP 403010547 A) in view of Gaskill et al. (US 5,682,148).

In regards to claim 6, Muramatsu discloses the method of claim wherein the description of the sent message includes at least a size of the sent message, but does not disclose including a name of the sent message and.

Gaskill et al. disclose assigning numbers to messages at orgination in column 2 line 19.

It would have been obvious to one of ordinary skill in the art to assign a unique name, such as a number, taught by Gaskill et al., to each portion of the segmented message taught by Muramatsu.

The motivation for doing so is given by Gaskill et al. in column 2 lines 28-29, where it is disclosed that the inclusion of a unique name can facilitate identification of missing messages.

In regards to claim 7, Muramatsu discloses the method of claim 6, but does not disclose wherein the description of the sent message further includes at least one of a time stamp, a checksum related to the sent message, and a destination address.

Gaskill discloses in column 1 lines 24-30 that each message is sent in association with a destination address.

It would have been obvious to one of ordinary skill in the art to include the destination address as taught by Gaskill in the identifying information as taught by Muramatsu because doing so will allow for message reception at only the intended receiver, as taught by Gaskill in column 1 lines 24-30.

In regards to claims 9, 15, and 19, Muramatsu and Gaskill et al. disclose a method for sending identifying information, which includes at least a name and size, comparing the sent information to the received information, indicating the results of the comparison to the sending node, and resending the unreceived portion. Muramatsu and Gaskill et al. do not disclose using the method over a single-channel wireless HF network.

Amateur radio communications are inherently conducted over a single-channel wireless HF network. FCC regulations require amateur radio to be carried out within the HF spectrum of 3-30 MHz. Indicating a single-channel does not prohibit the use of division techniques to

increase capacity. Each frequency division of the spectrum can be viewed as a discrete, single channel.

It would have been obvious to one of ordinary skill in the art to use the method of claim 9 as taught by Muramatsu and Gaskill et al. on an amateur radio communications network because HF networks are susceptible to interference as taught by the applicant in the background of the invention.

In regards to claims 11 and 16, Muramatsu and Gaskill et al. disclose the method of claim 9. Muramatsu further discloses informing the first node of the size of the portion that was not received by the second node. It is inherent that the first node must be informed of the size of the segment of the message to be retransmitted in order for it to resend the missing portion.

In regards to claims 12 and 17, Muramatsu and Gaskill et al. disclose the method of claim 9. Muramatsu further discloses informing the first node of the location of the message that was not received by the second node. It is inherent that the first node must be informed of the size of the segment of the message to be retransmitted in order for it to resend the missing portion.

In regards to claims 13 and 18, Muramatsu and Gaskill et al. disclose the method of claim 9. It does not disclose the method further including: re-transmitting the sent message to the receiving node if a predetermined time elapses before the sending node receives the response. The applicant admits in the background of the invention that it is known to resend a message if all or a portion of it is not received. It would have been obvious to one of ordinary skill in the art to resend the message after a predetermined time elapses because without a time-out mechanism the network might become useless while it waits interminably for the message to be received.

In regards to claim 14, Muramatsu and Gaskill et al. disclose the method of claim9, wherein the information about the transmitted message includes at least one of a time stamp, a checksum, and a destination address. See the claim 7 rejection above.

Allowable Subject Matter

7. Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Gonia et al. (US 5,500,864) disclose the use of a checksum for error detection in a received message.
- b. Suzuki (JP 56136056 A) discloses comparing a received message with identifying information to determine if an error has occurred.
- c. Hara (JP 60062758 A) discloses comparing a received message with identifying information to determine if an error has occurred.
- d. Yoshida (JP 60093855 A) discloses comparing received data with transmitted data for error detection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kerri M. Dyke whose telephone number is (571) 272-0542. The examiner can normally be reached on Monday through Friday, 8:10 am - 4:15 pm.

Art Unit: 2667

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

kmd



CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 9/1/2005